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ABSTRACT

The continuity of play styles of preschool children over a 1-year period was observed and related to teacher and peer reinforcement patterns influenced by sex stereotypes. Sixty-seven children, aged 18 months to 58 months, were observed in a natural setting using a behavior checklist consisting of 33 child behavior categories and 15 teacher- and peer-reaction categories. Each child in the study was observed for at least 40 hours, with 12 observations per hour. Data from the upper and lower 25% of the children on each of seven factors (derived from a factor analysis of the 33 behavior scores) were examined for continuity between the first and last 10 weeks of the children's participation in the study. The results indicate that certain play styles show stability for all children, while others change over time. The behaviors which change are those behaviors for which peers or teachers are giving an unusual amount of feedback to one group of children. For example, teachers had an extremely high rate of initiation activity towards passive children. Also, peers successfully exerted pressure to change a child's behavior, as in the case of boys who were initially low on male-preferred or high on female-preferred activities. Peers did not, however, exert negative pressure on girls who were high on the male-preferred activities or low on the female-preferred activities. Such girls show high stability in play style even though their behavior does not fit the traditional stereotypes. On the other hand, teachers gave girls with high activity levels more negative feedback, and these girls show low stability on this factor. Participation in solitary activities appears to be independent of feedback. (Author/SS)

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Play Styles in Early Childhood: Continuity and Change as a Function of Sex

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The purpose of the present paper is to present data on the continuity of several types of behavior (play styles) over a period of one year. The children in this study were 18 months to 24 months of age upon entry to the study, Kagan and Moss (1962) reported that behavior categories remained stable from childhood to early adulthood if the behavior is congruent with traditional sex role stereotyping. If the behavior contradicts the traditional stereotype then stability doesn't occur and more socially acceptable behaviors are substituted. The assumption behind these findings is that the child learns through social pressures, but the forms of such pressure were not made explicit.

Sex differences in the play of children from the age of three are well established and have not shown much change in the United States over the past 15 years (Fagot, 1977). In the 1977 study, I found that there was a relationship between the frequency of occurrence of cross-gender behaviors and the frequency of punishing contingencies administered by peers. Children engaged in sex appropriate behaviors also received far more positive feedback from their peers. However, the study did not look at whether the punishment of behaviors was effective in terminating such behaviors during the study. Recently Lamb and Roopnarine (in press) have shown that at least over short periods of time, three ten minute observation periods spread over a three week period in a natural setting, positive and negative reinforcement by peers was effective. Positively reinforced behaviors continued over a longer period of time than negatively reinforced behaviors. It was also clear that for the three and four year old children in this study, peer contingencies were reminding children of sex appropriateness and not teaching them. Positive peer reinforcement was most effective when it was given to males for male typed behaviors and to girls for female typed behaviors.

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While the Fagot study and the Lamb and Roopnarine study suggest that peers provide information concerning sex appropriateness and that this information affects performance of sex appropriate behaviors, the development of sex differences in play styles is not well understood. In fact, it is not even well documented, for we have much too little data from children 12 to 36 months of age, and this is likely to be a crucial period in the development of sex-preferred behaviors. Today I would like to discuss the behaviors of children from 18 months of age, and their teachers and peers' reactions to those behaviors. Because the data are longitudinal it is possible to look at the short term consequences in the way that Lamb and Rooperine did and to also determine if broad categories of behavior (play styles) are stable over time or if they vary as a function of differential reinforcement patterns. Although I will not have time to discuss the short term continency data, basically the findings replicated the Lamb and Roopnarine study in that behaviors given positive feedback were maintained longer than those given negative feedback, and that children maintained sex appropriate behaviors longer when given pos-

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itive feedback than they did sex inappropriate behaviors even with positive feedback.

METHOD

Subjects

Sixty-seven children, aged 18 months to 58 months participated in this study. Thirty-two of the children were boys and 35 were girls. The children were solicited from newspaper ads offering 4 hours of supervised free play per week in return for permission to observe. The socioeconomic background of the children varied: sixty of the children came from intact families, and had no previous day care experience. Basically, these were home-reared children. Sixty-two of the children were white, 2 were black, 2 Mexicanamerican, and 1 Asianamerican.

Behavior check list

A list of 33 child behaviors, and 15 teacher and peer reactions were used for this study. The child behaviors are activities such as rough and tumble, play, build with small blocks, dance, etc., while the reactions include behaviors such as hug and give physical affection as parallel play, etc.

Procedure

The children were seen in two different classes (two classes were run throughout the study), with approximately 12 children, equally divided among boys and girls, in each class. Two undergraduate students served as teachers throughout the term. The study continued over a two-year period, divided into 7 ten week terms corresponding to the university school year.

The room was approximately 20 by 25 feet, equipped with standard preschool equipment. Observers were in an observation room with a separate entrance and observed through a one-way mirror. Teachers were instructed to let the children choose their own activities, and to interfere only when a child was obviously disturbed. The teachers did provide varied activities each day, which were placed on tables or the floor for children to choose, but no attempt was made to have each child sample all activities.

Two hours of observation were completed each session. Children were observed in a predetermined order, once every five minutes. Each child was observed for five seconds, with the child behavior, the reactors, and then the reaction being coded. All children participated in the study for at least one ten week term, so that each child in the study was observed for at least 40 hours, 12 observations per hour. Many children remained in the play groups for more than one term so the data can be examined for any changes.

Observers were trained using video tapes. Reliabilities using video tapes and during spot checks in the observation room exceeded 90% agreement for the child behaviors and 75% for the reactions. A total of 21 observers participated at different times during the study.

RESULTS AND DISCUSSION

Factor analysis of behavior choices

A score for each child on each behavior was obtained by dividing the number of observations that a child was observed in that behavior by the total number of observations for that child. There were 33 behavior scores for each child in the study. Correlations of all possible pairs of behaviors were carried out on these scores and the resulting correlation matrix was factor analyzed with seven factors resulting, accounting for 94.2% of the variance. Tentative factor descriptions have been placed on each factor as presented in Table 1.

It should be made clear that seven factor scores can be obtained for each of the seven 10 week terms. One important methodological question concerns the stability of factor scores over terms. This was measured by correlation of factor scores for all children seen in at least two terms for all pairs of terms. Reliability was high (over .70) over a period of a year and even over the two year period reasonably stable correlations (over .40) were obtained. This was despite the fact that few children remained in the sample over the entire two year period.

General consequences of factor choices

The consequences for boys and girls in terms of peer and teacher reactions to high and low scores on different factors and combinations of factors have been presented in two previous papers (Fagot, 1978 a and b). Briefly it was clear that the choice of a particular play style had different consequences for boys and girls. For instance, high activity level in girls received few positive reactions from either peers or teachers, but in boys it resulted in a great deal of positive peer feedback. High task interest (Factor 1) for boys means more positive teacher attention, but no such result occurs for girls. Children choosing traditional sex role behaviors were given more positive feedback from peers. Children low on both factors (4 and 7) containing many sex-typed behaviors received significantly less positive peer and teacher reaction than other children. Children high on both sex-typed factors received more negative feedback than children in the other three categories.

Continuity and change over time

Today, I would like to look at the data from a longitudinal perspective and consider continuities and changes in the children's behavior from their entry through a one year period (although some children remained in the project over the two year period, the sample size would be too small if we took the two-year data only). As mentioned previously, overall factor consistency is high over the period of one year. What I would like to present today is the data from children who were high and low on each of the factors (upper and lower 25% of the children) upon entry to the play groups and to examine the consistency of their scores over a year. At the same time, I wish to show how peer and teacher reinforcement serve to inform the child of

the appropriateness of activities.

The data presented in Table 1 are correlations between the first 10 weeks of the children's participation, and 10 weeks at the end of one year of participation in the study. The summaries of peer and teacher interaction are of data presented in detail in Fagot (1978b). It is clear that certain play styles show stability for all children, while others change over time. The behaviors which change are those behaviors for which peers or teachers are giving an unusual amount of feedback to one group of children. For instance, on Factor 5 where a high score means that the child is not participating, it is seen that teachers have an extremely high rate of initiation with these children. There is an obvious attempt to involve the children, and that attempt is somewhat successful as indicated by the low stability for the children high on this factor. This is an example of a positive intervention on the part of the teachers. Peers also can successfully exert pressure to change a child's behavior as in the case of boys who are low on male preferred or high on female preferred activities. In both cases, peers give negative feedback to these children and in both cases you do not get high stability over the year. Girls who are high on the male preferred factor or low on the female preferred do not receive more negative feedback and show high stability even though their behavior doesn't fit the traditional stereotypes. On the other hand, teachers give girls who show high activity levels more negative feedback, and these girls show low stability on that factor. Participation in some activities appears to be independent of feedback, such as Factor 1, perhaps because these are for the most part solitary activities.

These data suggest that play styles of some children can be changed by teacher or peer intervention. In the case of the passive children, the teacher intervention was planned, but in all other cases, the teachers did not see the changes that took place as valuable. In other words, they were not conscious of trying to discourage high activity level in girls, nor did they approve of the negative peer feedback to boys who preferred to try out female preferred activities. It should be noted that teachers did not attempt to encourage girls who had very low participation in male-preferred activities to try out those activities. In effect, as long as a child showed appropriate sex-stereotyping, they were encouraged by their peers and left alone by the teachers. It should also be noted that these differences did not develop within the play group nor did all children respond to teacher and peer reaction. The 18 month old child enters the play group and heads for the dolls or trucks depending upon his/her sex. At 36 months, the choice is still sex-determined although now the play may be complex and involve a great deal of role play. The peer group served to inform the child when behavior was inappropriate (by peer standards) but they did not produce the differences.

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Table 1

Stability Correlations for Factors and Summary

of Peer and Teacher Reactions

Factors	Boys Hi	Boys Low	Girls Hi	Girls Low	Stability for Whole Sample
Factor 1	.96**	.89**	.91**	.90**	.94**
Cognitive complex tasks	Peer feedback low on this category for both hi and low. Teacher feedback high for high children, particularly boys.				
Factor 2	.77**	.82**	.85**	.91**	.84**
High social cooperation	High positive peer and teacher feedback for high children. No increase in negative for low children, simply ignored.				
Factor 3	.96**	.72*	.65	.98**	.89**
High active motor and verbal	Positive peer feedback for hi boys. Negative teacher feedback for hi boys and girls				
Factor 4	.94**	.61	.79**	.97**	.79**
High male preferred aggressive	Hi positive peer feedback for hi boys. Hi negative peer feedback for low boys.				
Factor 5	.54	.78**	.45	.83**	.69**
passive, non-task behaviors	Hi peer and teacher positive feedback for low children. Hi teacher initiation for high children				
Factor 6	.90**	.87**	.94**	.86**	.86**
task involved low activity level	Peer feedback low. Positive teacher feedback for hi children.				
Factor 7	.66	.97**	.98**	.83**	.91**
female preferred behaviors	Negative peer feedback for hi boys Positive peer feedback for low boys and hi girls.				

N for total sample was 67.
N for correlations for hi and low children was 8 children per cell.

** $p < .01$

* $p < .05$